Knobbe Martens Olson & Bear LLP
Intellectual Property Law

550 West C Street
Suite 1200
San Diego CA 92101
Tel 619-235-8550
Fax 619-235-0176
www.kmob.com

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Confidentiality Notice:

TO:	Leon Yan Bon Lum
FIRM:	U.S. P.T.O.
FACSIMILE NO.:	703-872-9306
OUR REF.:	NAGACO.005A
YOUR REF.:	Appl. No. 09/988,728
FROM:	Drew S. Hamilton
OPERATOR:	Michelle Tow
DATE:	May 2, 2005

NO. OF PAGES: 7 (incl. cover sheet)
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PTOL-413A (08-03)
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U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Applicant Initiated Interview Request Form

Application No.: 09/988728 First Named Applicant: Gowri Pyapal Selvan
Examiner: Leon Yan Bon Lum Art Unit: 1641 Status of Application: _____

Tentative Participants:
(1) Drew S. Hamilton (2) Cort Wetherald
(3) _____ (4) _____

Proposed Date of Interview: 5/3/05 **Proposed Time:** 9:00 (AM/PM)

Type of Interview Requested:
(1) [ ] Telephonic (2) [X] Personal (3) [ ] Video Conference

Exhibit To Be Shown or Demonstrated: [ ] YES [X] NO
If yes, provide brief description: _____

Issues To Be Discussed

Issues (Rej., Obj., etc)	Claims/ Fig. #s	Prior Art	Discussed	Agreed	Not Agreed
(1) Rej.	1	Sheppard, Jr.	[ ]	[ ]	[ ]
(2) Rej.	1	Sizto, et al.	[ ]	[ ]	[ ]
(3) _____	_____	_____	[ ]	[ ]	[ ]
(4) _____	_____	_____	[ ]	[ ]	[ ]

[X] Continuation Sheet Attached Please see attached set of proposed claims.

Brief Description of Arguments to be Presented:
The claims are patentable over the art of record since, for example, the acts of "generating a trigger signal", "generating an output signal", process and generating a count are neither taught nor suggested by the prior art.

An interview was conducted on the above-identified application on _____.

NOTE:
This form should be completed by applicant and submitted to the examiner in advance of the interview (see MPEP § 713.01).
This application will not be delayed from issue because of applicant's failure to submit a written record of this interview. Therefore, applicant is advised to file a statement of the substance of this interview (37 CFR 1.133(b)) as soon as possible.

_____ _____
(Applicant/Applicant's Representative Signature) (Examiner/SPE Signature)

NAGACO.005A
CLAIMS For Discussion 5/2/05
NOT FOR ENTRY IN THE RECORD

METHODS AND APPARATUS FOR DETECTING AND QUANTIFYING LYMPHOCYTES WITH OPTICAL BIODISCS

App No: 09/988,728 Filing Date: 16 Nov 01
Inventor: Gowri K. Pyapali

1. (Currently Amended) A method of conducting an assay, the method comprising:

providing a sample of cells in a chamber in a disc, the chamber including at least one capture zone with a capture agent, the disc including at least one inlet port and a vent port on a first surface of the disc;

loading the disc into an optical reader;

rotating the disc so as to separate different cell types into different capture zones;

directing an incident beam of electromagnetic radiation to the at least one capture zone so as to capture cells in the at least one capture zone;

detecting at least one beam of electromagnetic radiation formed after interacting with the disc ~~at the capture zone~~;

generating a trigger signal in response to trigger information contained in the at least one beam;

~~converting~~ generating an output signal indicative of at least a portion of the ~~detected~~ at least one beam ~~into an output signal~~ relating to the captured cells;

processing at least a portion of the output signal in response to the trigger signal; ~~and~~

analyzing the at least a portion of the output signal to extract therefrom information relating to the number of cells captured at the at least one capture zone;

generating a counting of ~~captured~~ the number of cells in each of the at least one capture zones; and

providing an output including the counts~~, wherein the output includes counts for CD4 cells and CD8 cells~~.

2. (Previously Presented) The method according to claim 1, wherein the chamber is internal to the disc and is bounded on opposite sides by a substrate and cap.

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3. (Original) The method according to claim 1, wherein the optical disc is constructed with a reflective layer such that light directed to the capture zone and not striking a cell is reflected.

4. (Previously Presented) The method according to claim 1, wherein the optical disc is constructed such that light directed to the capture zone and not striking a cell is transmitted through the optical disc, the disc being between the light source and the a detector.

5. (Previously Presented) The method according to any one of claims 1-5, wherein the disc surface is coated with a first group of cell capture agents.

6. (Previously Presented) The method according to claim 5, wherein the cell capture agents define a capture zone.

7. (Currently Amended) The method according to claim 6, wherein a second group of cell capture agents define a second capture zone.

8. (Original) The method according to claim 7, wherein the first and second captures zones are in one chamber.

9. (Original) The method according to claim 5, wherein the cell capture agents are for binding with cell surface antigen.

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10. (Original) The method according to claim 9, wherein the cell surface antigen is selected from the CD family of antigens.

11. (Original) The method according to claim 10, wherein the cell surface antigen is selected from the group consisting of CD3, CD4, CD3, and CD45.

12. (Original) The method according to claim 1, further including:
directing the sample of cells into proximity with the cell capture agents;
incubating the cells in the presence of the capture agents; and
allowing the cells to specifically bind to the capture agents.

13. (Original) The method according to claim 12, further including analyzing the number of cells captured to thereby determine a cell concentration in the sample.

14. (Previously Presented) The method of claim 13, wherein the analyzing includes detecting sufficiently large changes in a level of light reflected from or transmitted through the disc.

15. (Original) The method of claim 13, wherein the analyzing includes using image recognition to count captured cells.

16. (Previously Presented) The method of claim 15, wherein the image recognition distinguishes one type of white blood cell from another.

NAGACO.005A
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17. (Original) The method of claim 1, wherein the chamber has a plurality of capture zones, each having a different cell capture agent.

18. (Previously Presented) The method of claim 17, wherein the rotating includes rotating for a sufficient period of time at a sufficient speed so that the cells have an opportunity to bind with the capture ~~molecules~~agents.

19. (Original) The method of claim 18, wherein the rotating includes rotating for a sufficient period of time at a sufficient speed so that unbound cells are moved away from the capture zones.

20. (Original) The method of claim 19, wherein the rotating is done at a single speed.

21. (Original) The method of claim 17, further comprising counting ~~the~~ captured cells in each of the capture zones and providing an output including the counts.

22. (Previously Presented) The method of claim 21, wherein the output includes a ratio of CD4 to CD8 cells.

23-29. Cancelled.

30. (Previously Presented) The method of claim 12, wherein the analyzing includes detecting sufficiently large changes in the level of light reflected from or transmitted through the disc.

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31. (Previously Presented) The method of claim 12, wherein the analyzing includes using image recognition to count captured cells.

32. (~~New~~Currently Amended) The method of Claim 1, wherein the disc comprises a first layer of ~~strepatavidin~~streptavidin, a first antibody raised in a first species against a type of immunoglobulin of a second species, and a second antibody raised in the second species against a cell surface antigen.

33. (New) The method of Claim 1, wherein each of the capture zones are sequentially located in a fluid path between the inlet port and the vent port, and wherein capture zones are sequentially provided for CD4, CD8 and a control in relation to the fluid path.

34. (New) The method of Claim 1, wherein the at least one beam comprises a first beam for detecting the trigger information and a second beam for interacting with the disc at the at least one capture zone.

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